

### AMENDMENTS TO THE CLAIMS

*Please amend the claims as follows:*

1. (Currently amended) A method of protecting an actuator against failure, comprising ~~the following steps:~~

[[~~-~~]] establishing a norm ~~(206)~~ of factors affecting ~~[[the]]~~an operation of the actuator ~~(201)~~ as based on ~~[[the]]~~ an operating environment ~~(301)~~ of the actuator[[~~,~~]];

[[~~-~~]] providing the norm ~~(206)~~ with a tolerance defining a condition for the operation of the actuator ~~(201)~~ in the operating environment ~~(301)~~;

[[~~-~~]] observing the operating environment ~~(301)~~ of the actuator ~~(201)~~ in order to detect a deviation that falls outside said tolerance, the observation being performed by ~~means of an~~ environmental fuse ~~(220)~~ having comprising a sensor member ~~(204)~~ with a first connecting surface ~~(401)~~ and a second connecting surface ~~(402)~~ for feeding a flux through ~~them~~, an active layer ~~(403)~~ therebetween which is disposed between the first connecting surface and the second connecting surface, wherein the active later is arranged to cause a change in the flux's passing through the active layer ~~(403)~~ when

~~characterized in that the method comprises the following steps~~

cumulatively subjecting the active layer ~~(403)~~ to a component present in the operating environment ~~(301)~~, and

[[~~-~~]] limiting and/or interrupting a supply ~~(203)~~ to the actuator ~~(201)~~, ~~in order to keep this in working order, in condition that~~when said deviation falls outside said ~~condition tolerance~~ for the operation.

2. (Currently amended) A method as defined in Claim 1, ~~characterized in that~~wherein the method further comprises ~~the step of~~ generating an excitation signal by ~~means of~~ said sensor member ~~(204)~~.

3. (Currently amended) A method as defined in Claim 1, ~~characterized in that~~ wherein the method further comprises generating ~~[[of]]~~ a response by ~~means of a~~ functional member ~~(204)~~ of the environmental fuse ~~(202)~~, in response to an excitation signal.

4. (Currently amended) A method as defined in Claim 3, ~~characterized in that~~ wherein said response comprises a function in which the supply (203) to the actuator (201) is limited and/or interrupted.

5. (Currently amended) A method as defined in Claim 3, ~~characterized in that~~ wherein said response comprises an alarm function (409).

6. (Currently amended) A maintenance server (901), ~~characterized in that it has means for processing, storing~~ comprising a block configured to process and store information concerning an alarm from an environmental fuse and/or for generating a response in order to limit and/or interrupt the supply to that actuator whose environmental fuse is the source of the alarm, wherein said environmental fuse (220) has a sensor member (204) with a first connecting surface (401) and a second connecting surface (402) for feeding a flux through ~~them~~, an active layer (403) therebetween which is disposed between the first and second connecting surfaces, wherein the active layer is arranged to cause a change in the flux's passing through the active layer (403) when cumulatively subjected to a component present in the operating environment (301), and means for a block configured to limit and/or interrupt ~~limiting and/or interrupting~~ a supply (203) to the actuator (201), in order to keep ~~this~~ the actuator in a working order.

7. (Currently amended) A maintenance server (901) as defined in Claim 6, ~~characterized in that it is implemented with software means~~ comprising software as an implementation.

8. (Currently amended) A maintenance server (901) as defined in Claim 6, ~~characterized in that it has means for reporting~~ comprising a block configured to report alarm information to a data network.

9. (Currently amended) A maintenance server (901) as defined in Claim 8, ~~characterized in that wherein~~ said data network comprises one or a combination of the following: Internet, a local network, and a network based on a cellular system ~~and/or combination of some of these~~.

10. (Currently amended) An environmental fuse (202) for protecting an actuator (201) against failure, the environmental fuse (202) ~~having~~comprising a sensor member (204) to detect a change that occurs in an environment (301) and deviates from a tolerance according to a norm (206), and a functional member (205) ~~having functional means (408) to limit, a block configured to limit or~~ interrupt the supply (203) to the said actuator (201) and/or to give an alarm (409), said environmental fuse ~~being characterized in that the environmental fuse has~~further comprising a sensor member (204) having a first connecting surface (401) and a second connecting surface (402) for feeding a flux ~~them~~, an active layer (403) ~~therebetween disposed between the first and second connecting surfaces, wherein the active layer is configured which is~~ arranged to cause a change in the flux's passing through the active layer (403) when cumulatively subjected to a component present in the operating environment (301).

11. (Currently amended) An environmental fuse (202) as defined in Claim 10, ~~characterized in that it comprises~~ further comprising a collecting arrangement for collecting a component present in the composition of the environment (301).

12. (Currently amended) An environmental fuse (202) as defined in Claim 11, ~~characterized in that wherein~~ said collecting arrangement is based on the collection of a component present in the environment (301) on a substrate through diffusion, electrical interaction, impaction, interception, filtering and/or deposition.

13. (Currently amended) An environmental fuse (202) as defined in Claim 11, ~~characterized in that wherein~~ the collecting arrangement ~~has~~ comprises a collecting substrate comprising a wire, strip, dielectric substrate, conductive substrate and/or filter.

14. (Currently amended) An environmental fuse ~~(202)~~ as defined in Claim 10, ~~characterized in that wherein~~ the sensor member ~~(204)~~ is ~~arranged~~configured to detect particulate material, gas and/or moisture.

15. (Currently amended) An environmental fuse as defined in Claim 10, ~~characterized in that said flux is~~ wherein said flux comprises a flux of electric current.

16. (Currently amended) An environmental fuse ~~(202)~~ as defined in Claim 10, ~~characterized in that wherein~~ the change in said flux's passing is based on a change of the opacity of a medium and/or an interface thereof.

17. (Currently amended) An environmental fuse ~~(202)~~ as defined in Claim 16, ~~characterized in that said flux is~~ wherein said flux comprises a flux of radiation.

18. (Currently amended) An environmental fuse ~~(202)~~ as defined in Claim 10, ~~characterized in that wherein~~ said actuator ~~(201)~~ is ~~the~~comprises a controller of another actuator.

19. (Currently amended) An environmental fuse ~~(202)~~ as defined in Claim 10, ~~characterized in that wherein~~ the environmental fuse ~~(202)~~ has comprises:

[[ - ]] a first component ~~(E1)~~ of the sensor member ~~(204)~~ to detect a first change that occurs in the environment ~~(301)~~ and deviates from a first tolerance according to a norm ~~(206)~~, and

[[ - ]] a second component ~~(E2)~~ of the sensor member ~~(204)~~ to detect a second change that occurs in the environment ~~(301)~~ and deviates from a second tolerance according to a norm ~~(206)~~.

20. (Currently amended) An environmental fuse (202)—as defined in Claim 19, ~~characterized in that wherein~~ said first component(E1) and second (E2)—component (E1, E2)—of the sensor member (204)—are integrated into an integrated sensor member.

21. (Currently amended) An environmental fuse (202)—as defined in Claim 10, ~~characterized in that wherein~~ the environmental fuse ~~has~~comprises:

[[—]] a first functional member ~~having functional means~~configured to limit and/or[[,]] interrupt a first part of the supply to the actuator to be protected and/or to give an alarm, and

[[—]] a second functional member ~~having functional means~~configured to limit and/or[[,]] interrupt a second part of the supply to the actuator to be protected and/or to give an alarm.

22. (Currently amended) An environmental fuse (202)—as defined in Claim 10, ~~characterized in that wherein~~ the environmental fuse (202)—has a modular component to be replaced with another similar component.

23. (Currently amended) An environmental fuse (202)—as defined in Claim 22, ~~characterized in that the~~ wherein the modular component of the environmental ~~fuse~~ fuse (202) comprises the sensor member.

24. (Currently amended) An environmental fuse (202)—as defined in Claim 10, ~~characterized in that wherein~~ the environmental fuse comprises a memory for storing one or more of an environment, actuator, norm, ~~and/or~~and a quantity value dependent on the state of the environment.

25. (Currently amended) An environmental fuse (202)—as defined in Claim 10, ~~characterized in that wherein~~ the environmental fuse comprises one or more of a memory for authenticating an environment, actuator, norm, ~~and/or~~and a quantity value dependent on the state of the environment.

26. (Currently amended) An environmental fuse (202) as defined in Claim 10, ~~characterized in that~~ wherein the sensor member (204) of the environmental fuse (202) ~~has~~ comprises an active layer (403, E3) having one or more of a capacitance, an inductance, ~~and/or~~ and a resistance.

27. (Currently amended) An environmental fuse (202) as defined in Claim 26, ~~characterized in that~~ wherein said active layer (403, E3) ~~forms~~ is configured to form part of a measuring bridge.

28. (Currently amended) An actuator (201), ~~characterized in that~~ wherein the actuator ~~has an~~ comprises the environmental fuse (202) according to Claim 10.

29. (Currently amended) An actuator (201) as defined in Claim 28, ~~characterized in that it has~~ further comprising one or more of an electric drive, power supply, drive controller, pump, and fan ~~and/or a preferred combination of these~~.